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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/725,059	12/02/2003	Paul-Andre Lavoie	1061958	2938

7590 07/11/2006  
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CANADA

EXAMINER
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EASHOO, MARK

ART UNIT	PAPER NUMBER
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1732

DATE MAILED: 07/11/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b> 10/725,059	<b>Applicant(s)</b> LAVOIE ET AL.	
	<b>Examiner</b> Mark Eashoo, Ph.D.	<b>Art Unit</b> 1732	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 24 April 2006.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-15 is/are pending in the application.
- 4a) Of the above claim(s) 16 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-15 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |                                                                                                                                          |                                                                                         |
|------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                                                              | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                                     | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>2 ea.</u> | 6) <input type="checkbox"/> Other: _____                                                |

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## DETAILED ACTION

### *Election/Restrictions*

Applicant's election without traverse of claim group I, claims 1-15, in the reply filed on 24-APR-2006 is acknowledged.

Claim 16 is withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected claim grouping, there being no allowable generic or linking claim. Election was made without traverse in the reply filed on 24-APR-2006.

### *Information Disclosure Statement*

The information disclosure statements filed 18-MAR-2004 and 24-FEB-2005 comply with the provisions of 37 CFR 1.97, 1.98 and MPEP § 609. Accordingly, they have been placed in the application file and the information referred to therein has been considered as to the merits.

### *Claim Rejections - 35 USC § 103*

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claims 1-2 and 4 are rejected under 35 U.S.C. 103(a) as being unpatentable over Fukumura et al. (US Pat. 5,834,052).

Fukumura et al. teaches the basic claimed process of coextrusion, comprising: mixing a polymer with an active material lithium salt, and a conductive material to form an electrode material (5:50-7:67); mixing a polymer with other additives but without an active material as a protective layer (5:50-7:67); coextruding a protective layer with an

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electrode material onto a moving current collector sheet, such that the electrode material is in contact with one side of the current collector (5:50-6:25, 3:55-4:25 and Fig. 1); and a slot-type extrusion die having multiple openings (Fig. 1).

Fukumura et al. does not specifically teach a protective layer comprising a lithium salt. However, Fukumura et al. suggests that the protective layer is essentially the same as the electrode material but without the active material. As such, a person of ordinary skill in the art would have found it obvious to have used a lithium salt containing protective layer but without the active material, and would have been motivated to do so in order to use substantially similar materials that would adhere/bond well to one another.

Claims 12-15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Fukumura et al. (US Pat. 5,834,052) in view of applicant's admitted prior art (see US 2004/0159964 for text of instant disclosure).

Fukumura et al. teaches the basic claimed process as set forth above, regarding claim1. Fukumura et al. further teaches that control of the layer thickness is desired (4:10-25).

Fukumura et al. does not teach controlling layer thicknesses using various measuring devices (eg. optical, ultra-sonic, etc.). However, applicant's admission teaches that controlling layer thicknesses using various measuring devices (eg. optical, ultra-sonic, etc.) is known to those skilled in the art and extruded to ensure strict tolerances (para. 28). At the time of invention a person of ordinary skill in the art would have found it obvious to have used any of the various measuring devices, as taught by applicant's admission, in the process of Fukumura et al., and would have been motivated to do so in order to achieve desired layer thicknesses within a specific thickness tolerance.

Claims 3, 5-6, 10 and 11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Fukumura et al. (US Pat. 5,834,052) in view of Fukumura et al. (US Pat. 5,674,556).

Fukumura et al. '052 teaches the basic claimed process as set forth above, regarding claim1.

Fukumura et al. '052 does not teach extruding onto to both sides of a collector/support. However, Fukumura et al. '556 teaches extruding onto to both sides of a collector/support (Fig. 7A). At the time of invention a person of ordinary skill in the art would have found it obvious to have arranged the dies of Fukumura et al. '052 to extrude onto to both sides of a collector/support, as taught by Fukumura et al. '556, and would have been motivated since Fukumura et al. '052 suggests that coating both sides of the collector/foil is "typical" (6:20-25).

Claims 7-9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Fukumura et al. (US Pat. 5,834,052).

Fukumura et al. teaches the basic claimed process as set forth above, regarding claim1.

Fukumura et al. does not teach extruding onto to both sides of a collector/support wherein a preform/support is passed though the extrusion die. However, extruding onto to both sides of a preform/support that is passed though the extrusion die is well known in the extrusion art. At the time of invention a person of

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ordinary skill in the art would have found it obvious to have used a dies that extrudes onto to both sides of a collector/support wherein a preform/support is passed through the die, as commonly practiced in the art, in the process of Fukumura et al., and would have been motivated since Fukumura et al. suggests that coating both sides of the collector/foil is "typical" (6:20-25).

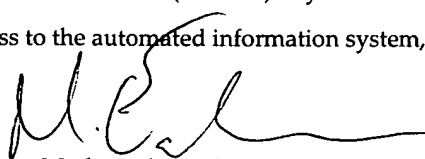
The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Lin et al., Schock, Takano et al., and Kobayashi et al. provide well-known examples of various co-extrusion processes wherein a preform is passed through an extrusion die.

### *Correspondence*

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Mark Eashoo, Ph.D. whose telephone number is (571) 272-1197. The examiner can normally be reached on 7am-3pm EST, Monday - Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Christina Johnson can be reached on (571) 272-1176. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



Mark Eashoo, Ph.D.  
Primary Examiner  
Art Unit 1732

6/Jul/06

me  
6 July 2006